

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A method of non-linear processing of at least one set of luminance, saturation, and hue parameter values of input picture signals so as to produce output picture signals based on the hue parameter value and ~~modified an output luminance parameter value~~ and ~~an output saturation parameter values value~~, wherein the method comprises the steps of:

receiving an input picture signals;
determining input luminance, saturation and hue parameter values of said input picture signals;
obtaining the output saturation parameter value by increasing the input saturation parameter value up to a maximum level; and
determining said maximum level using the input hue value and the output luminance parameter value such that clipping of a color driving value does not take place ~~non-linear processing is responsive to the hue parameter values of the input picture signals.~~

2. (Currently Amended) The method ~~of~~ as claimed in claim 1, wherein the non-linear processing ~~includes~~ comprises the steps of:
determining a power depending on the hue parameter values,
; and

_____raising the input saturation parameter ~~values~~ value to the power.

3. (Currently Amended) The method ~~of~~ as claimed in claim 2,
~~including wherein said method further comprises the step of:~~

_____adapting the power based on histogram data derived from one or more of the input parameter values.

4. (Currently Amended) The method ~~of~~ as claimed in claim 1,
wherein the non-linear processing ~~includes~~ comprises the steps of:

_____determining a power depending on the hue parameter
~~values~~ value, ~~;~~ and

_____raising the input luminance parameter ~~values~~ value to the power.

5. (Currently Amended) The method ~~of~~ as claimed in claim 4,
~~including wherein said method further comprises the step of:~~

_____adapting the power based on histogram data derived from one or more of the input parameter values.

6-7. (Cancelled)

8. (Currently Amended) The method ~~of~~ as claimed in claim 61,
wherein the maximum ~~saturation values depend~~ level depends on the
~~modified output~~ luminance parameter value.

9. (Currently Amended) The method ~~of~~ as claimed in claim 62, wherein the ~~modified-output~~ saturation parameter value is substantially determined by the equation:

$$S' = S_{\max} (S/S_{\max})^{\gamma_h} ,$$

where S is the saturation parameter value, S_{\max} is the maximum saturation value, and γ_h is the power.

10. (Currently amended) The method ~~of~~ as claimed in claim 3, wherein, for a predetermined hue parameter value, the power is adapted on the basis of a weighed average input saturation parameter value of the input picture signals, representing pixels in a window of an image.

11. (Currently amended) The method ~~of~~ as claimed in claim 10, wherein, for a predetermined hue parameter value, the power for a current window is dependent on the histogram data of a current and/or a previous window.

12. (Original) An apparatus ~~comprising picture processing circuitry for carrying out the method as claimed in claim 1~~ for non-linear processing of at least one set of luminance, saturation, and hue parameter values of input picture signals so as to produce output picture signals based on the hue parameter value and an output luminance parameter value and an output saturation parameter value, the apparatus comprising:

means for receiving an input picture signals;
means for determining input luminance, saturation and hue
parameter values of said input picture signals;
means for obtaining the output saturation parameter value
by increasing the input saturation parameter value up to a maximum
level; and
means for determining said maximum level using the input
hue value and the output luminance parameter value such that
clipping of a color driving value does not take place.

13-20. (Cancelled).